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ABSTRACT

This paper is concerned with the syntactic problems raised by the grammatical phenomenon in Japanese that is called here the "complementizer." In the types of sentences under consideration here, S2 is a nominal clause. Such a clause acts as a noun phrase adjunct to the verb in S1. The noun clauses in question are often followed by a postposition which shows their grammatical relation to the main verb. The remainder of the noun phrase is the "complementizer." The complementizer may include a head noun which the clause complements. Or it may include a formal noun which is grammatically a head noun but apparently without semantic contribution to the sentence. Or it may include "to" (iu). The paper stresses the importance of distinguishing between noun clauses and relative clauses when the surface structures are the same. The relationship of the complementizers "koto" and "to," "no" as a complementizer, the ga-weakening rule, copula adjustment, and Makino's critique of formal nouns are discussed. (CFM)

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JAPANESE COMPLEMENTIZERS

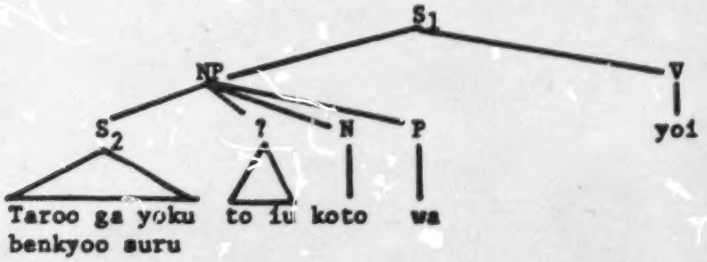
Kilyong Watanabe

1. The Phenomenon

Our concern in this paper[1] is with sentences like (1) through (5).

(1) John ga dekaketa koto o shitte iru.[2]
I know that John went out.

(2) Taroo ga yoku benkyoo suru to iu koto wa yoi.
It is nice that Taroo studies hard.



(3) Mibun ni yotte kotoba ga chigau to iu shuukan ga mada aru.
There still exists the practice that people use different levels of speech depending on social status.

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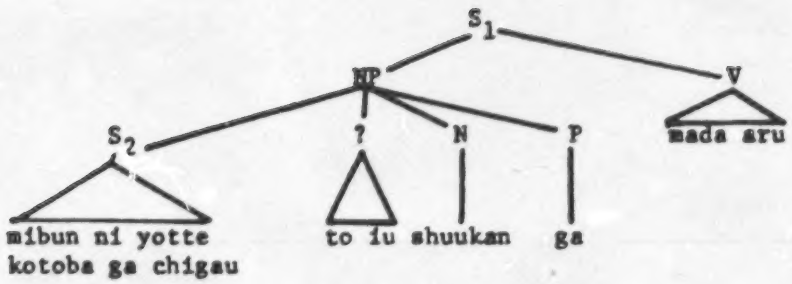
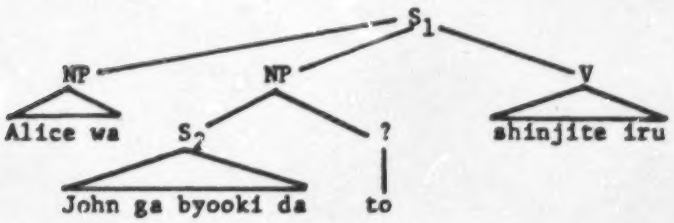


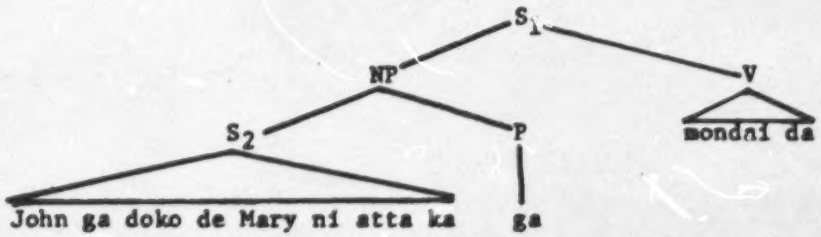
(4) Alice wa John ga byooki da <u>to</u> shinjite iru.

Alice believes that John is sick.



(5) John ga doko de Mary ni atta ka ga mondai da.

The problem is where John met Mary.



In each example, S_2 is what we will term a "nominal clause". Such a clause acts as an NP adjunct to the verb of the main S_1. In common with other Japanese noun phrases, those in question are often followed by a postposition (here <u>ga</u>, <u>o</u>, or <u>wa</u>), which shows their grammatical relation to the main verb. The remainder of the NP (underlined in each case above) is what we will term the "complementizer". The complementizer may include a head noun which the clause "complements", like <u>shuukan</u> 'practice' in (3). Or it may include a "formal noun" (<u>keishiki meishi</u>), like <u>koto</u> in (1) and (2), which is grammatically a head noun, but apparently without semantic contribution to the sentence. Or it may include <u>to</u> (<u>iu</u>), whose grammatical and semantic status we will have something to say about in due course.

2. Nominal Clauses and Relative Clauses

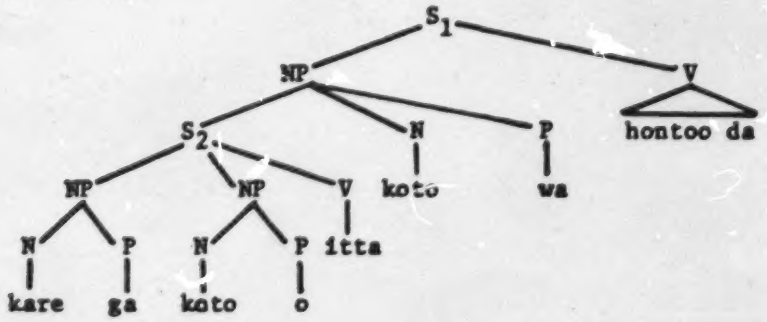
The surface structure of some nominal clauses is the same as that of relative clauses, which is responsible for the failure of some traditional grammarians to distinguish the two clause types. But clearly they should be distinguished from each other. The most important way in which they differ is in their abstract structure. That is, the abstract structure of relative clauses always involves the identity of a noun inside the clause with its head noun. On the other hand, nominal clauses do not have any such identity. Consider the following sentence which can be understood in two ways: one, as a relative clause sentence, the other, as a nominal clause sentence.

(6) Kare ga itta koto wa hontoo da.

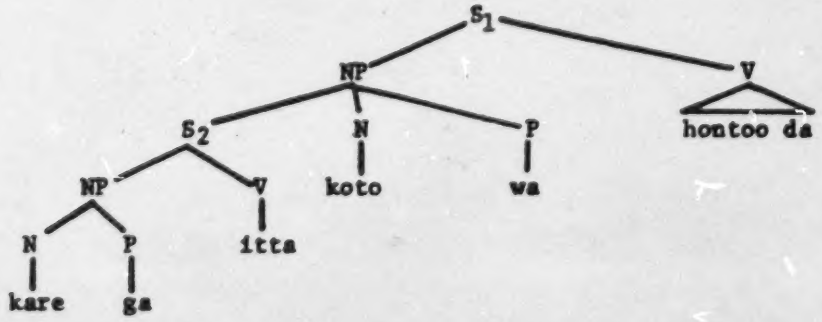
a. What he said is true.
b. It is true that he said something.

In interpretation (a), what is true is the content of his statement; but in interpretation (b), what is true is that he made a statement. Notice that when we get interpretation (a), koto refers to a specific utterance, and is understood to be both the object of itta 'said' and the subject of hontoo da 'be true'. This can be represented as in (7).

(7)



On the other hand, when we get interpretation (b), koto refers to nothing in specific, and is only the subject of hontoo da. This can be represented as in (8).

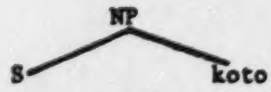


Thus, depending on whether or not there is a noun in S_2 identical to the head noun, it becomes either a relative clause or a nominal clause. The deletion process involved in the relative structure makes the two look alike, but only superficially.

3. Previous Proposals on koto and to

Several other students of Japanese nominal clauses have discussed the relationship between the complementizers koto and to. We will consider briefly the ideas of Ueda (1966, ch. II), Makino (1969, ch. IV), and Kuno (1970, ch. V).

3.1 Ueda's Treatment. Ueda assumes that all nominal clauses have the following abstract structure.



And she gives the rules by which nominal sentences containing to are derived from those containing koto. Her rules adequately change nominal clauses followed by koto into those followed by to. However, her analysis fails to explain why to iu koto and to following nominal clauses have the same meaning and perform the syntactic function, as in the following sentences:

(9) a. Alice wa John ga byooki da to shitte iru.

b. Alice wa John ga byooki da to iu koto o shitte iru.

Alice knows that John is sick.

(10) a. Kare wa hon o Bill ni yaroo to itta.

b. Kare wa hon o Bill ni yaroo to iu koto o itta.[3]

He said to give Bill a book.

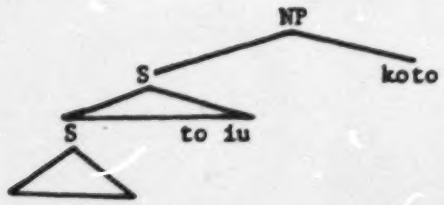
(11) a. Kare wa hon o Bill ni yare to meerei shita.

b. Kare wa hon o Bill ni yare to iu koto o meerei shita.[3]

He ordered (someone) to give Bill a book.

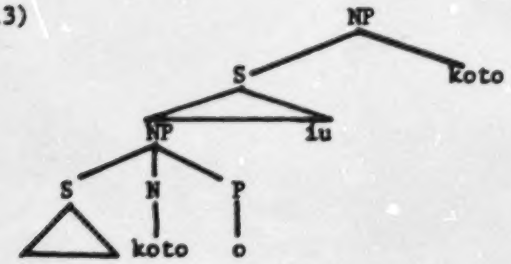
Secondly, she does not provide any way to block certain ungrammatical sentences. Since in her theory a structure like (12):

(12)



presumably comes from one like (13),

(13)



therefore sentences (14a-16a) come from sentences (14b-16b).

(14) a. Mary ga soo itta <u>to iu koto</u> wa akiraka da.

b. *Mary ga soo itta <u>koto o iu koto</u> wa akiraka da.

It is obvious that Mary said so.

(15) a. Alice wa John kekkon shita <u>to iu koto</u> o shitte iru.

b. *Alice wa John ga kekkon shita <u>koto o iu koto</u> o shitte iru.

Alice knows that John got married.

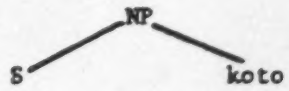
(16) a. Ano hito wa America de wa dono tatemono mo takai <u>to iu koto</u> o shinjite iru.

b. *Ano hito wa America de wa dono tatemono mo takai <u>koto o iu koto</u> o shinjite iru.

He believes that every building in America is tall.

According to her rules, when the clause ends in tense as in the (b) sentences, the change from <u>koto</u> into <u>to</u> is optional. Consequently, they should be acceptable to native speakers as surface structure forms. However, these sentences never occur at the surface level. She apparently did not notice that sentences containing <u>to</u> in the head noun position could have been derived from sentences containing <u>to iu koto</u>.

3.2 Makino's Treatment. Makino also assumes that all nominal clause sentences have the abstract structure as below:



Unlike Ueda, he claims that sentences containing to after the embedded S are not nominal clause sentences, giving the following arguments. (a) All nominal clauses are followed either by the subjective marker ga or by o, the objective marker. However, a clause ending with to is never followed by them.

(17) *John ga nihon ni itta to ga uso da.

(18) *Bill wa John ga yama ni noboru to o shinjite iru.

(b) In nominal clauses the subjective marker ga of the constituent sentence may optionally be changed into no. However, in the clauses followed by to, the subjective marker ga cannot be changed into no. His observations are correct. Nevertheless, the facts do not necessarily lead to his conclusion that the clauses followed by to come from a different abstract structure than nominal clause sentences. Notice again that sentences containing to have stylistic variants containing to iu koto.

(19) a. John ga nihon ni itta to wa uso da.

b. John ga nihon ni itta to iu koto {wa / ga} uso da.

It is a lie that John went to Japan.

(20) a. Bill wa John ga yama ni noboru to shinjite iru.

b. Bill wa John ga yama ni noboru to iu koto o shinjite iru.

Bill believes that John is going to climb the mountain.

And in sentences containing to iu koto, ga, or o may occur after the embedded sentences and the subjective marker may be changed into no.

(21) John no (nihon ni) itta to iu koto wa uso da.

(22) John no noboru to iu koto o shinjite iru.

Makino's claim that sentences containing to have a different abstract structure from thos containing to iu koto becomes very questionable when we examine the clefted equivalents of these sentences.[4]

(23) Uso na no wa John ga nihon ni itta { to iu koto / *to } da.

What is a lie is that John went to Japan.

(24) Shinjite iru no wa John ga yama ni noboru { to iu koto / *to } da.

What he believes is that John is going to climb the mountain.

When an NP of the sentences containing to is clefted, only the variant with to iu koto is grammatical. Therefore, it seems reasonable to consider that clauses followed by to and to iu koto come from the same abstract structure, which is a nominal clause sentence structure. Thus, within Makino's theory of nominal clauses, not only can the relationship between sentences containing to iu koto and those containing to not be brought out, but also the relationship between the clauses followed by koto and those by to which Ueda has captured fails to be incorporated.

3.3 Kuno's Treatment. Kuno assumes two different abstract structures also, though both are nominal clauser for him.

He claims that there is a clear semantic difference between these structures and argues that the choice of a complementizer determined by the existence or non-existence of a presupposition on the part of the speaker. Kuno argues that when the speaker presupposes the truth of the nominal clause, koto is used. However, in Japanese, there are many sentences that take koto when the embedded clauses are not assumed to be true by the speaker, as in (25) through (32).

(25) Watakushi wa kodomo ga puuru de oboreru koto o osorete iru.

I am afraid that the child will drown in the pool.

(26) John wa Aiko to kekkon suru koto o yume mite iru.

John fancies that he will marry Aiko.

(27) Seijika wa nihon ga senshinkoku de aru koto o shuchoo shitagaru.

Politicians like to claim that Japan is an advanced country.

(28) Tanaka-san wa kanojo ni au koto o sakete iru.

Mr. Tanaka is avoiding meeting her.

(29) Kare wa yuki ga kozue ni tsumotte iru koto o soozoo shinagara e o kaite iru.

He is painting a picture imagining snow lying on the twigs.

(30) Kare ga iku koto wa hontoo rashii.

It seems to be true that he is going.

(31) Kare ga senshi suru koto wa okoru ka mo shirenai.

It might happen that he would die in battle.

(32) Kojiki ga okumanchooja ni naru koto mo ari uru.

It is even possible for a beggar to become a billionaire.

The following sentences contradict Kuno's claim that if the speaker does not make any presupposition about the embedded sentence, to iu koto is used when the nominal clause is the subject of a matrix predicate.

(33) John ga moo sugu shinu to iu koto wa machigai nai.

It is certain that John is soon going to die.

(34) John ga nihon ni iku to iu koto wa higekiteki da.

It is tragic that John is going to go to Japan.

(35) John ga amerikajin de aru to iu koto wa atarimae da.

It is obvious that John is an American.

(36) Watakushi ga kare ni okane o haratta to iu koto o yoku oboete ite kudasai.

Please remember that I paid him.

(37) Anata ga nesshin ni hataraita to iu koto o kooryo ni iremashita.

I took into consideration that you worked hard.

(38) Ano hito wa hitori de mite kita to iu koto o kookai shite iru.

He regrets that he went and saw it alone.

In the above sentences, the verbs of the matrix S are factive verbs. However, these verbs can co-occur in Japanese with to iu koto, which Kuno regards as a non-factive complementizer. Thus, Kuno's claim that the syntactic occurence of koto, to iu koto, and to can be predicted from the existence or non-existence of presuppositions on the part of the speaker seems to be incorrect.[3]

4. To iu koto and Deletion

The ideas of Ueda, Makino and Kuno as examined above on the relationship between koto and to are not sufficiently general or explicit. They seem to overlook the fact that to iu koto is the only form of com-

plementizer which can always correctly appear in the right class of cases. From the following examples, it will be clear that the occurence of koto or to is restricted to certain environments while that of to iu koto is not.

Notice that sentences in question form may or may not take to iu koto without a change in meaning.

(39) a. John ga doko de Mary ni atta ka (to iu koto) ga mondai da.
The problem is where John met Mary.

(40) a. Itsu nihon ni iku ka (to iu koto) o shiranai.
I don't know when he is going to Japan.

(41) a. John ga nani o tabeta ka (to iu koto) wa akiraka da.
It is obvious what John ate.

(42) a. John ga dare to hanasu ka (to iu koto) wa daiji da.
It is important with whom John talks.

(43) a. Dooshite rakudai o shita ka (to iu koto) wa wakaranai.
I don't know why I flunked.

When the nominal clause NP in the above examples is clefted, however, to iu koto must appear to make sentences grammatical.

(39) b. Mondai na no wa John ga doko de Mary ni atta ka $\left\{\begin{array}{l}\text{to iu koto da}\\ *\text{da}\end{array}\right\}$.
What the problem is that where John met Mary.

(40) b. Shiranai no wa itsu nihon ni iku ka $\left\{\begin{array}{l}\text{to iu koto da}\\ *\text{da}\end{array}\right\}$.
What I don't know is when he is going to Japan.

(41) b. Akiraka na no wa John ga nani o tabeta ka $\left\{\begin{array}{l}\text{to iu koto da}\\ *\text{da}\end{array}\right\}$.
What is obvious is what John ate.

(42) b. Daiji na no wa John ga dare to hanasu ka $\left\{\begin{array}{l}\text{to iu koto da}\\ *\text{da}\end{array}\right\}$.
What is important is with whom John talks.

(43) b. Wakaranai no wa dooshite rakudai o shita ka $\left\{\begin{array}{l}\text{to iu koto da}\\ *\text{da}\end{array}\right\}$.
What I don't know is why I flunked.

As noted earlier, sentences with <u>to</u> also must have <u>to iu koto</u> when the NP containing the nominal clause is clefted.

(44) a. Alice wa John ga shoojiki da to itta.
Alice said that John is honest.

b. Alice ga itta no wa John ga shoojiki da {to iu koto / *koto / *to} da.
What Alice said is that John is honest.

(45) a. Kare wa minna de pikuniku ni ikoo to teean shita.
He suggested that we all go on a picnic together.

b. Kare ga teean shita no wa minna de pikuniku ni ikoo {to iu koto / *koto / *to} da.
What he suggested is that we all go on a picnic together.

(46) a. Kare wa watakushi ga uso o tsuita to omotte iru.
He thinks that I told him a lie.

b. Kare ga omotte iru no wa watakushi ga uso o tsuita {to iu koto / *koto / *to} da.
What he thinks is that I told him a lie.

(47) a. John wa Aiko ga koi o shite iru to shinjite iru.
John believes that Aiko is in love.

b. John ga shinjite iru no wa Aiko ga koi o shite iru {to iu koto / *koto / *to} da.
What John believes is that Aiko is in love.

(48) a. Watakushi wa kare ga kuru to shitte iru.
I know that he is coming.

b. Watakushi ga shitte iru no wa kare ga kuru {to iu koto / *koto / *to} da.
What I know is that he is coming.

Among sentences with koto, some require to iu koto when the nominal clause NP is clefted, but others do not.

(49) a. Oya wa kodomo ga baka na koto o nageita.
The parents regretted that their child was stupid.

b. Oya ga nageita no wa kodomo ga baka {da to iu koto / *na koto} da.
What the parents regretted was that their child was stupid.

(50) a. Kanojo ga uso o tsuita koto o utagawanakatta.
He did not doubt that she told a lie.

b. Utagawanakatta no wa kanojo ga uso o tsuita {to iu koto / *koto} da.
What he did not doubt was that she told a lie.

(51) a. Mary ga shinde shimatta koto o kiita.
I heard that Mary had died.

b. Kiita no wa Mary ga shinde shimatta {to iu koto / *koto} da.
What I heard was that Mary had died.

(52) a. Mary ga hannin de aru koto o suitei shita.
He inferred that Mary was the culprit.

b. Suitei shita no wa Mary ga hannin de aru {to iu koto / *koto} da.
What he inferred was that Mary was the culprit.

(53) a. Kare ga America ni nigeta koto o shitte iru.
I know that he escaped to America.

b. Shitte iru no wa kare ga America ni nigeta {to iu koto / *koto} da.
What I know is that he escaped to America.

(54) a. Mary ga baka na koto wa akiraka da.
It is obvious that Mary is stupid.

b. Akiraka na no wa Mary ga baka {da to iu koto / na koto} da.
What is obvious is that Mary is stupid.

(55) a. Mary ga shinda koto wa hontoo da.
It is true that Mary died.

b. Hontoo na no wa Mary ga shinda {to iu koto / koto} da.
What is true is that Mary died.

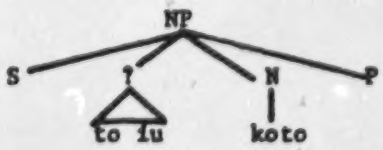
(56) a. Mary ga hannin de aru koto ga ki ni iranai.
It bothers me that Mary is the culprit.

b. Ki ni iranai no wa Mary ga hannin de aru {to iu koto / koto} da.
What bothers me is that Mary is the culprit.

(57) a. Mary ga dekaketa koto o kakushita.
He concealed the fact that Mary had left.

b. Kakushita no wa Mary ga dekaketa {to iu koto / koto} da.
What he concealed was the fact that Mary had left.

The facts illustrated in (30) through (57) may be summarized as follows. (a) When the clause is a question, to iu koto is the required complementizer in clefted cases; otherwise it alternates with zero. (b) When the clause is a statement, to iu koto is always possible in the clefted cases (and in general). The possible alternates are much more restricted in clefts; to never occurs, and koto only with certain verbs.[6] Our proposal to account for this range of data is that all these nominal clause NP's have as their abstract structure:



There are optional deletion rules which determine permitted alternative complementizers.[7]

Rule (A): Delete iu koto if

i) P is postposition o

ii) main S verb is of correct class of verb[8]

Rule (B): Delete to iu if

i) P is postposition ga, o, or wa

ii) clause ends in tense.

Rule (C): Delete to iu koto if

i) P is postposition ga, o, or wa

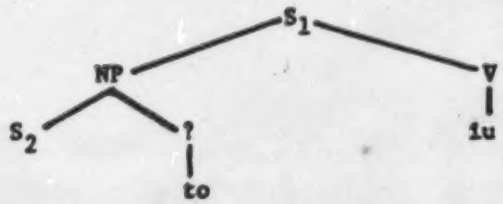
ii) clause ends in ka.

There are several advantages to this approach. First of all, the clauses which are intuitively felt to be nominal clauses, but which lack a head noun so as to be defined as nominal clauses are in fact nominal clauses at the abstract level which have been altered on the surface level by transformations, in the spirit of Ueda's treatment of quotative clauses. We simplify the grammar because we propose only one underlying abstract structure for these nominal clauses, regardless of the fact that these sentences end in tense, in quotation form or in question form. We explain why to iu koto may always occur in every case but why others like koto or to do not. And we account for the paraphrase relations among the possible alternative complementizers.

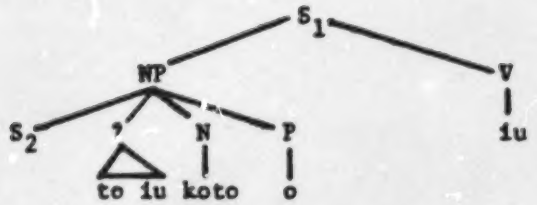
If our proposal is not adopted, some form of complicated complementizer insertion rules will be necessary in connection with clefted sentences. The details will differ depending on what analysis of clefts is adopted, and at what point complementizers enter into abstract structures. If clefts are to be derived from non-clefts by a rule, then either the rule will have to alter the complementizer in certain cases, or be restricted to operation only when the proper complementizer is already present. If, on the other hand, clefts are developed by phrase structure rules independently of non-clefts, then either elaborate context restrictions must be placed on the expansion of complementizers, or they must be inserted sensitive to the already mentioned structural features. In no event will the required apparatus be preferable to our rules (A) to (C), and the advantages of a single abstract structure will be sacrificed.

The principle problem apparent in our analysis is how to deal with the to iu which we postulate as a part of the abstract complementizer. That koto is a noun is relatively clear both from its syntactic behavior and from the fact that other nouns are substitutable for it in the complementizer structure, as in to iu uwasa 'rumor that ...', to iu jootai 'situation that ...', and so on. Iu of course looks like the ordinary verb iu 'say'. But the semantic content of the ordinary verb is quite absent in the complementizer cases, and the form iu there is never conjugated in any of the ordinary verbal categories. We therefore analyse (58) as derived from (59).

(58)



(59)



All this doesn't really resolve the problem of what the to iu of the complementizer is, and why part of it resembles the verb 'say' in Japanese. No doubt any satisfactory explanation will have to be found in the history of the complementizers. At least we can note that it is an equally serious problem for any treatment of Japanese complementizers in the approach common to all the work we have considered.

A less serious difficulty is raised by examples of the sort (60) to (62).

(60) a. Sono hon o yomu koto ni shimashita.
I decided to read the book.

b. Sono hon o yomu koto ni shimashoo.
Let's make up our minds to read the book.

c. Sono hon o yomanai koto ni shite imasu.
I make it a practice not to read the book.

(61) Sono kaisha ni tsutomeru koto ni narimashita.
It came about that I worked for that company.

(62) Ryokoo no mokuteki wa tanoshimu koto ni aru.
The purpose of traveling is to have fun.

Paraphrases with to iu in front of koto are not possible for these sentences, and they cannot be derived from such a source. There are other peculiarities which distinguish them from the examples we have so far considered. The tense of the clause is not freely specifiable here: past tenses are not possible. And this koto cannot be replaced by no (cf. section 5). It may be that there is a separate complementizer koto parallel to tokoro and tame (cf. sections 5 and 10) which occurs in the abstract structure (63).

(63)

However, the correct analysis is unclear at present.

5. No as a Complementizer

There are numerous cases where the word no appears following nominal clauses, with or without to iu.

(64) a. John ga kekkon shita no ga ki ni iranai.
I don't like John's having married.

(65) a. Kami o nobasu no ga hayatte iru.
Letting the hair grow is popular.

(66) a. Taroo ga yoku benkyoo suru no wa yoi.
It is nice that Taroo studies hard.

(67) a. Mary ga soo itta no wa akiraka da.
It is obvious that Mary said so.

(68) a. Max ga sono hito o aishite iru no wa Alice ni fushigi datta.
It was strange to Alice that Max loved that person.

(69) a. Mary ga baka da to iu no wa akiraka da.
It is obvious that Mary is stupid.

(70) a. Mary ga shinda to iu no wa hontoo da.
It is true that Mary died.

(71) a. Mary ga hannin de aru to iu no ga wakatta.
I realized that Mary was the culprit.

(72) a. Mary ga shinda to iu no o shitte iru.
I know that Mary died.

(73) a. Uchi o kau no ni kane o tsukau.
He spends money in buying a house.

(74) a. Minna de iku no ni sansee shita.
I agrees to our going together.

(75) a. Okane o kasegu no ni muchuu da.
He is bent on money-making.

(76) a. Asa hayaku okiru no ni wa yoru hayaku nenakereba naranai.

In order to get up early, you have to go to bed early.

(77) a. Ano gakusee wa hon o takusan kau no ni mainichi ichijikan arubaito o shite iru.

The student works an hour everyday in order to buy a lot of books.

(78) a. Sekai isshuu o suru no ni wa fune ga ii.

In order to travel around the world, it is better to go by boat.

(79) a. Yoku hataraku no ni wa genki de nakereba naranai.

In order to work hard, you have to be healthy.

(80) a. Watakushi wa Tanaka-san ga jidoosha ni noru no o mimashita.

I saw Mr. Tanaka getting into the car.

(81) a. Akachan ga nete iru no ga miemasu.

I can see the baby sleeping.

(82) a. Kanojo wa kare ga sukii o shite iru no o shashin ni totta.

She took a picture of him skiing.

(83) a. Kare wa jibun ga ugoite iru no o kagami de mita.

He saw himself moving in the mirror.

The above sentences apparently include three semantically different no's. In sentences (64) through (75), the morpheme no delivers a meaning that can be rendered by 'the fact that' or 'that' or 'in doing so and so'. In sentences (76) through (79), the no obviously expresses purpose and thus means 'in order to'. And in sentences (80) through (83), the no indicates a situation or condition. In spite of these semantic differences, the no's in the above sentences seem to perform an identical syntactic function. That is to say, they all seem to take over the function of the head noun. This assumption that these no's play a function identical to head nouns is substantiated by the fact that the no's can be replaced by various nouns as below without changing the meaning of the sentences.

(64) b. John ga kekkon shita koto ga ki ni iranai.

(65) b. Kami o nobasu koto ga hayatte iru.

(66) b. Taroo ga yoku benkyoo suru koto wa yoi.

(67) b. Mary ga soo itta koto wa akiraka da.

(68) b. Max ga sono hito o aishite iru koto wa Alice ni fushigi datta.

(69) b. Mary ga baka da to iu koto wa akiraka da.

(70) b. Mary ga shinda to iu koto wa hontoo da.

(71) b. Mary ga hannin de aru to iu koto ga wakatta.

(72) b. Mary ga shinda to iu koto o shitte iru.

(73) b. Uchi o kau koto ni kane o tsukau.

(74) b. Minna de iku koto ni sansee shita.

(75) b. Okane o kasegu koto ni muchuu da.

(76) b. Asa hayaku okiru tame ni wa hayaku yoru nenakereba naranai.

(77) b. Ano sakusee wa takusan hon o kau tame ni mainichi ichi-jikan arubaito o shite iru.

(78) b. Sekai isshuu o suru tame ni wa fune ga ii.

(79) b. Yoku hataraku tame ni wa genki de nakereba naranai.

(80) b. Watakushi wa Tanaka-san ga jidoosha ni noru tokoro o mimashita.

(81) b. Akachan ga nete iru tokoro ga miemasu.

(82) b. Kanojo wa kare ga sukii o shite iru tokoro o shashin ni totta.

(83) b. Kare wa jibun ga ugoite iru tokoro o kagami de mita.

Thus the morpheme no is interchangeable with koto in (64) through (75); in sentences (76) through (79), it is interchangeable with tame; and in sentences (80) through (83), it is interchangeable with tokoro. The fact that the no's perform the same syntactic function, and that they have the same meaning as koto or tame or tokoro suggests the following rules.

Rule (D) Koto Deletion Rule: the head noun koto may be deleted optionally.

Rule (E) Tame Deletion Rule: the head noun tame may be deleted optionally.

Rule (F) Tokoro Deletion Rule: the head noun tokoro may be deleted optionally.

Rule (G) No-insertion Rule[9]: the morpheme no is inserted whenever a tensed verb form appears in a subordinate clause without a following noun.

This no-insertion rule not only explains the occurrence of no in nominal clause sentences but also illuminates various related areas in the grammar of Japanese. For example, the rule helps explain why no never occure as an independent noun in the Japanese language, and why the same morpheme appears both as a marker of abstract nominal clauses and as a pronoun in the head noun position in relative clause structures. The reason is that in either case a noun has been deleted and, for grammatical reasons, a no is inserted in its place.

6. A Critique of Makino on No

In his dissertation (1969, ch. 4), Makino considered no to be an equivalent of koto insofar as it occurs as a complementizer. This led him into a number of awkward analyses which it may be helpful to examine. He gives (among others) the following examples.[10]

(84) John ga nihon ni itta {no / *koto} de aru.

John went to Japan.

(85) Nani o John ga nihon de shita {no / *koto} de aru ka ga mondai da.

The problem is what John did in Japan.

(86) Benkyoo o America de shita {no / *koto} de aru ka ga mondai da.

The question is whether or not he studied in America.

(87) America ni iku {no / *koto} ni hikooki ga ii.

To go to America it is better to go by plane.

(88) Yama ni noboru {no / *koto} ni jyoobu de nai.

He is not strong enough to climb a mountain.

(89) Hon o kau {tame / no / *koto} ni hataraku.

He works in order to buy books.

(90) John wa benkyoo suru { tame / no / *koto } ni America ni kita

John came to America to study.

(91) John ga America ni iku { *tame / no / koto } ni Bill wa sansee shita.

Bill agreed to John's going to America.

Makino uses two devices in order to account for the non-interchangeability of complementizers which are treated the same syntactically. One device is to subcategorize the predicate of the matrix S for complementizers. The other is to appeal to the 'syntactic cohesion' between the constituent sentence and the matrix sentence. These devices however fail to provide generalizations.

For sentences (84) - (86) Makino assumes that the copula de aru admits either a concrete or abstract complement. His assumption leads him to analyze sentences (84) - (86) with a structure like:

To such an underlying structure he applies his complementizer insertion rule and then he obligatorily deletes the subject NP before a nominal clause. He does not consider or attempt to explain why koto does not co-occur with de aru. Applying subcategorization to sentences (84) - (86), we might assume that the lexicon must be provided with the information that the copula de aru only co-occurs with the complementizer no but never with the complementizer koto. However, the inadequacy of this approach becomes obvious when we consider the following examples.

(92) Shitte iru no wa John ga dekaketa to iu { koto / *no } da.

What I know is that John went out.

(93) Akiraka na no wa Mary ga soo itta to iu { koto / *no } de aru.

What is obvious is that Mary said so.

(94) Juubun neru koto wa karada ni ii { koto / *no } de aru.

To get enough sleep is good for you.

The morpheme koto in sentences (92) - (94) is, in Makino's view, a complementizer which should be interchangeable with the morpheme no. Yet, when no replaces koto in these sentences, they become ungrammatical (cf. section 7). This means that if we use subcategorization, then de aru (or its variant da) must be specified contradictorily to take only no, and to take only koto. One might want to argue that de aru in sentences (84) - (86) is different from de aru in sentences (92) - (94), but there is no independent reason to believe that de aru's in both cases are different. They are phonetically the same and they do not show sufficient semantic distinction to be regarded as separate morphemes.

This dilemma is due primarily to the original assumption that the no in question is a complementizer. Actually, there are at least two reasons to doubt that it is. First of all, the Ga-weakening rule (cf. section 8) which changes the subjective particle ga of nominal clauses into no as in (95).

(95) John $\left\{\begin{matrix} \text{ga} \\ \text{no} \end{matrix}\right\}$ itta koto o shitte iru.

I know that John went.

However, when this rule is applied to (84), we get ungrammatical results.

(96) John $\left\{\begin{matrix} \text{ga} \\ *\text{no} \end{matrix}\right\}$ itta no de aru.

Secondly, an NP of a nominal clause can be clefted and to iu may appear in a clefted structure.

(97) Shitte iru no wa John ga itta to iu koto da.

What I know is that John went.

(98) Hontoo na no wa John ga itta koto da.

What is true is that John went.

The sample sentence cannot be clefted, however, either with or without to iu.

(99) *De aru no wa John ga itta no da.

(100) *De aru no wa John ga itta to iu no da.

In fact, this suggests that the sentences has already been clefted. If this no is not a complementizer, then of course it poses no problem for the analysis of nominal clauses.

Makino describes sentences (87) - (91) as nominal clauses indicating purpose. However, sentence (91) seems different from the others. It does not indicate purpose. The ni in sentence (91) is similar to to ni of

(101) Hon o kau {no / koto} ni kane o tsukau.[11]

He spends money in buying books.

(102) Yama o noboru {no / koto} ni chikara ga iru.

You need strength in climbing a mountain.

This koto ni or no ni (often translatable as 'in ... ing') has nothing to do with purpose. Makino's claim that koto is impermissible if the matrix predicate is either an adjective or an adjectival noun works well enough for those cases. However, for sentences (85) - (90), his proposed criterion for the permissibility or impermissibility of koto turns out to be very arbitrary and inadequate. Makino attempts to determine the impermissibility of koto in instances when the matrix predicate is a verb by the degree of syntactic cohesion between the constituent sentence and the matrix sentence. He suggests a diagnostic using -te kara 'after'. If we can separate the clauses with -te kara as in (103), then koto is impermissible; if we cannot as in (104), then koto is permissible.

(103) Hataraite kara hon o kau.

He buys books after working.

(104) *Kane o tsukatte kara hon o kau.

It is perhaps true that (103) could be used to describe the same situation as (89), and also that (104) and (101) are not similarly related. But even if we put aside the obvious difficulties of turning this diagnostic into a workable rule, it is clear that many questions remain.

The problem is how to define the closeness between the constituent S and the matrix S, and furthermore, there seems to be a high degree of arbitrariness in the choice of -te kara. Notice in the following examples that sentences containing -te kara cannot have a nominal clause indicating purpose, either with koto or with no.

(105) Eega o mite kara gohan o taberu.

After seeing a movie, I will have a meal.

*Gohan o taberu tame ni eega o miru.
*Gohan o taberu koto ni eega o miru.
*Gohan o taberu no ni eega o miru.

*I see a movie to eat a meal.

(106) Byooki ni natte kara rakudai o shita.

After I got sick, I flunked.

*Rakudai o suru tame ni byooki ni natta.
*Rakudai o suru koto ni byooki ni natta.
*Rakudai o suru no ni byooki ni natta.

*I got sick in order to flunk.

When -te kara sentences are changed into nominal clauses indicating purpose, the meaning of the sentences is changed. Moreover, we can never allow koto or no to be used in these sentences. Thus -te kara cannot be an adequate guide for determining the closeness of the matrix and constituent sentences, nor can it reasonably distinguish koto from no in purpose nominal clauses as Makino claims it can. Contrary to Makino's analysis, the reason these sentences do not take koto is clear in our analysis without trying to set up an adhoc diagnostic for the cohesion between the matrix and the constituent sentence. The reason is that in the underlying structure these sentences have tame and when tame is deleted no is inserted by the No-insertion rule. Therefore, since koto is not an intrinsic part of the underlying structure, it naturally cannot be an element of these sentences.

7. Two Constraints on the Koto Deletion Rule

At present, it is not clear whether there are any constraints on Tokoro-deletion and Tame-deletion. However, there seem to be some constraints on Koto-deletion. Observe in the following sentences that no is not permissible in place of koto.

(107) John ga doko de Mary ni atta ka to iu {koto / *no} ga mondai da.

The problem is where John met Mary.

(108) Itsu nihon ni iku ka to iu {koto / *no} o shiranai.

I don't know when he will go to Japan.

(109) John ga nani o tabeta ka to iu {koto / *no} wa akiraka da.

It is obvious what John ate.

(110) John ga dare to hanashita ka to iu {koto / *no} wa daiji da.

It is important with whom John spoke.

(111) Dooshite rakudai o shita ka to iu {koto / *no} wa wakaranai.

I don't understand why I flunked.

(112) John ga Bill ni hon o yare to iu {koto / *no} o meirei shita.

John ordered to give Bill a book.

(113) Kare ga hon o Bill ni yaroo to iu {koto / *no} o itta.

He suggested to give Bill a book.

When we compare sentences (107) - (113) with sentences (64) - (75) where no can replace koto, it is obvious that the nominal clauses in the former do not end in tense while those in the latter do. Therefore, we must add a condition to the Koto-deletion rule to the effect that the clause must end in tense.

Notice further in the following clefted sentences the no cannot take the place of koto.

(114) Ki ni iranai no wa John ga dekaketa {koto / *no} da.

What I don't like is that John went out.

(115) Hayatte iru no wa kami o nobasu {koto / *no} da.

What is popular is to let the hair grow.

(116) Akiraka na no wa Mary ga soo itta {koto / *no} da.

What is obvious is that Mary said so.

(117) Yoi no wa yoku benkyoo suru {koto / *no} da.

What is good is to study hard.

(118) Daiji na no wa kare ga nihon ni iku to iu {koto / *no} da.

What is important is that he goes to Japan.

(119) Ki ni iranai no wa kare ga dekaketa to iu {koto / *no} da.

What I don't like is that he went out.

(120) Shitte iru no wa John ga byooki da to iu {koto / *no} da.

What I know is that John is sick.

(121) Shinjite iru no wa America de wa dono tatemono mo takai to iu {koto / *no} da.

What he believes is that every building in America is tall.

(122) John ga meirei shita no wa hon o Bill ni yare to iu {koto / *no} da.

What John ordered is to give Bill a book.

(123) Watakushi ga iidashita no wa hon o Bill ni yaroo to iu {koto / *no} da.

What I suggested was that we give Bill a book.

(124) Shitte iru no wa itsu John ga dekakeru ka to iu {koto / *no} da.

What I know is when John goes out.

(125) Akiraka na no wa John ga nani o tabeta ka to iu {koto / *no} da.

What is obvious is what John ate.

Sentences (114) through (125) contain different classes of main verbs and different types of nominal clauses. For example, in sentences (120) - (121) the main verbs belong to the class of vert of quotation, while in (114) - (119) they do not belong to this class. The nominal clauses in (114) - (121), moreover, end in tense, whereas in (122) - (125) they do not. Furthermore, in sentences (114) - (117), the nominal clauses are followed by koto, while in the other sentences they are followed by to iu koto. However, in spite of these differences in the class of the main verb and in the final morphemes in the nominal clauses, which may or may not be tense, the head noun koto is never deleted. Therefore, we add to the Koto-deletion rule a further condition to the effect that a postposition must follow koto. This condition blocks the deletion of koto in the clefted sentences, because in the clefted sentences koto is always followed by the copula da, which is not a particle. At the same time, this condition does not block the deletion of koto in such nominal sentences as (64) - (75).

8. The Ga-weakening Rule

In Japanese, the subject postposition ga within a subordinate clause may be changed into no as in the following sentences.

(126) John {ga / no} dekaketa to iu koto o shitte iru.

I know that John went out.

(127) Empitsu {ga / no} yasui to iu koto wa akiraka da.

It is obvious that pencils are inexpensive.

(128) Tanaka-san {ga / no} kiree de aru to iu koto o shitte iru.

I know that Miss Tanaka is pretty.

(129) Mibun no yotte kotoba {ga / no} chigau to iu shuukan ga mada aru.

It is still customary to use different levels of speech depending on one's social status.

(130) Taifuu {ga / no} jyooriku shita to iu nyuusu o kiita.

I heard the news that the typhoon had struck.

However, notice in the following sentences that the subjective particle ga cannot be changed into no.

(131) a. John {ga / *no} gohan o tabeta koto o shitte iru.

I know that John had a meal.

(132) a. Empitsu {ga / *no} nihon de yasui to iu koto wa akiraka da.

It is obvious that pencils are inexpensive in Japan.

(133) a. Taifuu {ga / *no} koko ni jyooriku suru to iu nyuusu o kiita.

I heard the news that the typhoon will strike here.

(134) a. John {ga / *no} byooin kara kaette kita to iu koto o kiita.

I heard that John had returned from the hospital.

When we compare sentences (131a) - (134a) with sentences (126) - (130), we notice that the former group contain a noun and a particle immediately after the subject postposition ga. And since in these sentences the subject postposition ga cannot be changed into no, we have to provide some kind of condition, as suggested in Ueda (1969:39) to the effect that subject position ga in the nominal clause is changed into no only if N + ga is not directly followed by N + P. This rule we shall call the Ga-weakening rule.

Observe the applicability of the Ga-weakening rule to versions of (131a) - (134a) in which N + P is scrambled to the front of N + ga.

(131) b. Gohan o John {ga / *no} tabeta koto o shitte iru.

(132) b. Nihon de empitsu {ga / no} yasui to iu koto wa akiraka da.

(133) b. Koko ni taifuu {ga / no} jyooriku suru to iu nyuusu o kiita.

(134) b. Byooin kara John {ga / no} kaette kita to iu koto o shitte iru.

The only case in which the Ga-weakening rule is blocked, when N + P is scrambled, is sentence (131b), in which N of the N + P is the object of the verb of the constituent S. Notice in the following sentences that the Ga-weakening rule cannot be applied.

(135) Hon o John {ga / *no} ageta koto wa tashika da.

It is certain that John gave him the book.

(136) John {ga / *no} ageta koto wa tashika da.

It is certain that John gave it to him.

(137) Ocha o John {ga / *no} nonda koto ga wakatta.

I found out that John drank the tea.

(138) John {ga / *no} nonda koto ga wakatta.

I found out that John drank it.

(139) Tanaka-san o John {ga / *no} nagutta koto o shitte iru.

I know that John hit Mr. Tanaka.

(140) John {ga / *no} nagutta koto o shitte iru.

I know that John hit him.

(141) Sono gakkoo o John {ga / *no} deta to iu koto o kiita.

I heard that John graduated from that school.

(142) John {ga / *no} deta to iu koto o kiita.

I heard that John graduated from it.

As shown above, it seems that application of the Ga-weakening rule is blocked if the verb of the embedded S is transitive; on the other hand, it does not seem to matter whether the object plus the objective particle comes before or after the subject plus the particle ga, or whether they are deleted. Therefore, a condition must be added to the effect that the main verb cannot be transitive.

In Japanese, some transitive verbs take the postposition ga instead of the postposition o as the object marker. Observe in the following examples in what way this object postposition behaves in regards to the Ga-weakening rule.

(143) a. Ano hito ga rokkakokugo ga wakaru to iu koto o shitte iru.

b. Ano hito ga rokkakokugo *no wakaru to iu koto o shitte iru.

c. Ano hito *no rokkakokugo ga wakaru to iu koto o shitte iru.

d. Ano hito *no rokkakokugo *no wakaru to iu koto o shitte iru.

I know that he knows six languagues.

(144) a. Kare ga okane ga iru to iu koto wa tashika da.

b. Kare ga okane *no iru to iu koto wa tashika da.

c. Kare *no okane ga iru to iu koto wa tashika da.

d. Kare *no okane *no iru to iu koto wa tashika da.

It is obvious that he needs money.

(145) a. Ano hito ga mizu ga nomitai koto wa akiraka da.

b. Ano hita ga mizu *no nomitai koto wa akiraka da.

c. Ano hito *no mizu ga nomitai koto wa akiraka da.

d. Ano hito *no mizu *no nomitai koto wa akiraka da.

It is obvious that he wants to drink water.

(146) a. Kare ga sake ga nomenai koto wa yuumee da.

b. Kare ga sake *no nomenai koto wa yuumee da.

c. Kare *no sake ga nomenai koto wa yuumee da.

d. Kare *no sake *no nomenai koto wa yuumee da.

It is well-known that he does not drink sake.

In the above sentences (143c) - (146c), the subject postposition ga does not conform to the rule, because the subject N + ga is followed by N + P. And it is now obvious that the Ga-weakening rule does not apply to the postposition ga which corresponds to the object marker as shown in (143b) - (146b). As is well known, some speakers show a tendency to replace this syntactically objective postposition ga with the postposition o as in the following sentences.

(143) e. Ano hito rokkakokugo o wakaru to iu koto o shitte iru.

(144) e. Kare ga okane o iru to iu koto wa tashika da.

(145) e. Ano hito ga mizu o nomitai koto wa akiraka da.

(146) e. Kare ga sake o nomenai koto wa yuumee da.

Thus it seems that the postposition ga as an object marker has nothing to do with the Ga-weakening rule. This is true even in cases where there is no vacillation between ga and o.

(147) a. Kare ga eego ga dekiru to iu hookoku o kiita.

b. Kare ga eego *no dekiru to iu hookoku o kiita.

c. Kare *no eego ga dekiru to iu hookoku o kiita.

d. Kare *no eego *no dekiru to iu hookoku o kiita.

I heard the report that he is good at English.

(148) a. Tanaka-san ga ano hito ga suki da to iu uwasa o kiita.

b. Tanaka-san ga ano hito *no suki da to iu uwasa o kiita.

c. Tanaka-san *no ano hita ga suki da to iu uwasa o kiita.

e. Tanaka-san *no ano hito *no suki da to iu uwasa o kiita.

I heard the rumor that Mr. Tanaka loves her.

(149) a. Tanaka-san ga supootsu ga kirai da to iu koto wa akiraka da.

b. Tanaka-san ga supootsu *no kirai da to iu koto wa akiraka da.

c. Tanaka-san *no supootsu ga kirai da to iu koto wa akiraka da.

d. Tanaka-san *no supootsu *no kirai da to iu koto wa akiraka da.

It is obvious that Mr. Tanaka is not fond of sports.

(150) a. Ano hito ga eego ga heta da to iu koto wa wakatta.

b. Ano hito ga eego *no heta da to iu koto wa wakatta.

c. Ano hito *no eego ga heta da to iu koto wa wakatta.

d. Ano hito *no eego *no heta da to iu koto wa wakatta.

I found out that he is poor at English.

The subject postposition ga of sentences (147) - (150) as in the (c) cases is not changed into no because the N + P condition of the rule blocks the change. Neither is the second particle ga, which is not the subject postposition ga, changed into no. Therefore, we may conclude that the particle ga which is affected by the Ga-weakening rule is the subject postposition only.

Notice now the applicability of the Ga-weakening rule in the following sentences which have more than one ga in the embedded S.

(151) a. Ano akachan ga onaka ga itai koto wa akiraka da.
b. Ano akachan ga onaka no itai koto wa akiraka da.
c. Ano akachan no onaka ga itai koto wa akiraka da.
d. Ano akachan no onaka no itai koto wa akiraka da.

It is obvious that the baby has a stomach-ache.

(152) a. Kare ga chikara ga tsuyoi koto o shitte iru.
b. Kare ga chikaka no tsuyoi koto o shitte iru.
c. Kare no chikara ga tsyuoi koto o shitte iru.
d. Kare no chikara no tsyuoi koto o shitte iru.

I know that he is strong.

(153) a. Zoo ga hana ga nagai koto o wasureta ka?
b. Zoo ga hana no nagai koto o wasureta ka?
c. Zoo no hana ga nagai koto o wasureta ka?
d. Zoo no hana no nagai koto o wasureta ka?

Have you forgotten that the elephant has a long nose?

In the above sentences, which have been considered by some grammarians to possess double subjects, both the first postposition ga and the second postposition ga may be optionally changed into no. Sentences (151a) - (153a) have exactly the same meaning as (151b) - (153b) and sentences (151c) - (153c) apparently can be interpreted in two ways; one interpretation is as indicated in the translation and the other is as below for each sentence.

(151) It is obvious that the stomach of the baby is painful.

(152) I know that the strength of that person is strong.

(153) Have you forgotten that the nose of the elephant is long?

In other words, the first postposition ga, when changed into no, seems to function either as the subjective particle or the possessive particle. The second postposition may always be changed into no and thus function as the subject of the predicate following it. Although it is not clear whether these sentences truly have double subjects or not, it is assumed in this paper that they do, and that the Ga-weakening rule may affect any subject postposition.

Now observe the following sentences in which the Ga-weakening rule cannot be applied.

(154) Doko e John $\left\{\begin{matrix} \text{ga} \\ *\text{no} \end{matrix}\right\}$ itta ka (to iu koto) ga mondai da.

The problem is where John went.

(155) Nani o John {ga / *no} tabeta ka (to iu koto) wa akiraka da.

It is obvious what John ate.

(156) Itsu John {ga / *no} nihon ni itta ka (to iu koto) o shiranai.

I don't know when John went to Japan.

(157) Dooshite John {ga / *no} rakudai o shita ka (to iu koto) wa wakaranai.

I don't know why John flunked.

(158) John {ga / *no} iku ka doo ka hakkiri shinai.

It is not clear whether John will go or not.

(159) John wa kimitachi {ga / *no} hon o Bill ni yare to meerei shita.[12]

John ordered you to give the book to Bill.

(160) John wa ano hitotachi {ga / *no} iku daroo to iu koto o kiita.

John said that those people will probably go.

Sentences (154) - (160) contain nominal clauses, yet the subject postposition ga in the clauses cannot be changed into no. In (126) - (130), the clause ends in tense while in these cases it does not. It is therefore necessary to constrain the rule to operate only when the clause ends in tense.

So far we have treated nominal clause sentences containing to iu N as complementizer. Now observe in the following sentences whether or not the Ga-weakening rule is applied to nominal clause sentences in koto or to.

(161) Alice wa John {ga / no} shoojiki de aru koto o shinjite iru.

Alice believes that John is honest.

(162) Alice wa John {ga / no} kekkon shita koto o shitte iru.

Alice knows that John has married.

(163) Watakushi wa Tanaka-san {ga / no} naita koto ga wakatta.

I realized that Miss Tanaka cried.

(164) Nihon de kimono {ga / no} takai koto wa akiraka da.

It is obvious that kimono's are expensive in Japan.

(165) Alice wa John {ga / *no} kekkon shita to omotta.

Alice thought that John had married.

(166) Watakushi wa Tanaka-san {ga / *no} naita to itta.

I said that Miss Tanaka cried.

(167) John wa kimono {ga / *no} takai to kiita.

John heard that kimono's are expensive.

(168) Alice wa John {ga / *no} shoojiki de aru to shinjite iru.

Alice believes that John is honest.

Sentences (161) - (164) show that the Ga-weakening rule does apply to nominal clause sentences containing koto. However, sentences (165) - (168) show that the rule is not applied when to alone occurs as complementizer. Therefore, we add a constraint on the Ga-weakening rule to the effect that a head noun must be present.

Ga-weakening Rule: The postposition ga on the subject NP of a subordinate clause may be replaced by no if

(i) no N + P intervenes between subject and verb

and (ii) the verb is not transitive

and (iii) the clause ends in tense

and (iv) the clause has a head noun.

9. Copula Adjustment

The present tense copula form de aru is changed into na in some nominal clauses. Notice in the following sentences how the copula is adjusted before the head noun koto.

(169) a. Watakushi wa kare ga sono uchi no shujin {*da / *na / de aru} koto ga wakatta.

I realized that he was the head of the house.

(170) a. Ano hito ga sensee {*da / *na / de aru} koto wa akiraka da.

It is obvious that he is a teacher.

(171) a. Ano uchi ga apaato {*da / *na / de aru} koto o shirasete kureta.

They informed us that the building is an apartment.

(172) a. John ga byooki {*da / na / de aru} koto o shitte iru.

I know that John is sick.

(173) a. Mary ga kenkoo {*da / na / de aru} koto wa ureshii.

I am glad that Mary is healthy.

(174) a. Tabako ga karada ni yuugai {*da / na / de aru} koto o shuchoo shite iru.

He insists that cigarettes are harmful for health.

The above sentences show that the copula de aru is not changed into na before koto is it is preceded by an ordinary noun. However, the copular may appear as na if the morpheme preceding the copula is an adjectival noun.

Now, observe the change of the copula in the following sentences in which no has been inserted after koto has been deleted.

(169) b. Watakushi wa kare ga sono uchi no shujin {*da / na / de aru} no ga wakatta.

(170) b. Ano hito ga sensee {*da / na / de aru} no wa akiraka da.

(171) b. Ano uchi ga apaato {*da / na / de aru} no o shirasete kureta.

(172) b. John ga byooki {*da / na / de aru} no o shitte iru.

(173) b. Mary ga kenkoo {*da / na / de aru} no wa ureshii.

(174) b. Tabako ga karada ni yuugai {*da / na / de aru} no o shuchoo shite iru.

When no is present in the position of koto, the copula before no may appear as na no matter whether it is preceded by a noun or an adjectival noun. When to iu precedes koto, or no, however, no adjustment is made. Thus, that the copula in the following sentences is not changed is well stated by the rules.

(169) c. Watakushi wa kare ga sono uchi no shujin {*da / *na / de aru} to iu {koto / no} ga wakatta.

(170) c. Ano hito ga sensee {*da / *na / de aru} to iu {koto / no} wa akiraka da.

(171) c. Ano uchi ga apaato {*da / *na / de aru} to iu {koto / no} o shirasete kureta.

(172) c. John ga byooki {*da / *na / de aru} to iu {koto / no} o shitte iru.

(173) c. Mary ga kenkoo {*da / *na / de aru} to iu {koto / no} wa ureshii.

(174) c. Tabako ga karada ni yuugai {*da / *na / de aru} to iu {koto / no} o shuchoo shite iru.

The following sentences, which contain to after the embedded S, also do not satisfy the structural description for the copual adjustment. Accordingly, the copula is not changed.

(169) d. Watakushi wa kare ga sono uchi no shujin {da / de aru / *na} to wakatta.

(175) Ano hito ga sensee {da / de aru / *na} to kiita.

I heard that he is a teacher.

(171) d. Ano uchi ga apaato { da / de aru / *na } to shirasete kureta.

(172) d. John ga byooki { da / de aru / *na } to shitte iru.

(176) Mary ga kenkoo { da / de aru / *na } to omou.

I think that Mary is healthy.

(174) d. Tabako ga karada ni yuugai { da / de aru / *na } to shuchoo shite iru.

Copula-adjustment Rule: The copula may appear as na if

(i) the preceding word is an adjectival noun

or (ii) the following word is no.

10. A Critique of Makino on keishiki meishi

In his dissertation (1969, ch. 4, section 4.1.3), Makino discusses the traditional category of keishiki meishi ("formal nouns"). He maintains that formal nouns should not overlap with ordinary nouns (which can appear as head nouns of relative clauses) in their syntactic behavior, and that all formal nouns share the syntactic behavior of complementizers like koto. He also assumes that each formal noun performs a single syntactic function. In our discussion of the distinction between relative and nominal clauses (cf. section 2), we showed that koto (which is in fact often considered to be a formal noun) is ambiguous in its syntactic function between complementizer and head of relative clause. The same can be shown for some other formal nouns.

Observe in the following that although the sentences have the same surface structure forms as nominal clause sentences, they are not nominal clause sentences.

(177) a. Watakushi wa kare ga rikai dekinai ten o setsumee shite ageta.

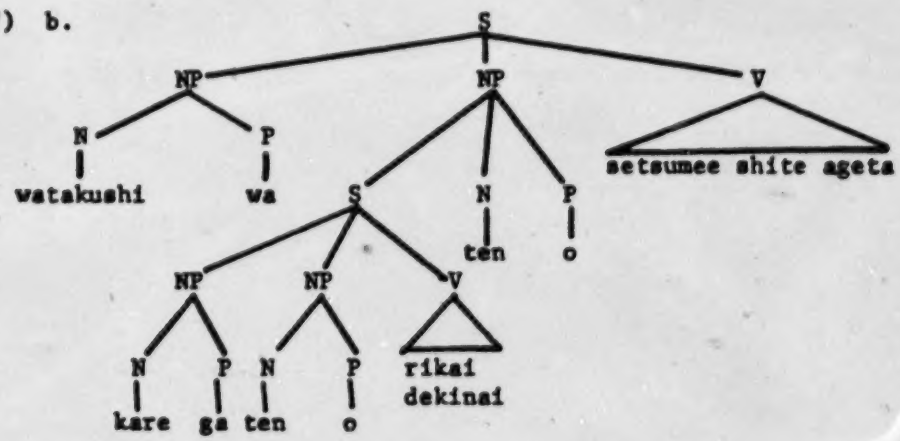
I explained to him the point which he could not understand.

(178) a. Watakushi wa rikai dekinai ten o Tanaka-san ni setsumee shite moratta.

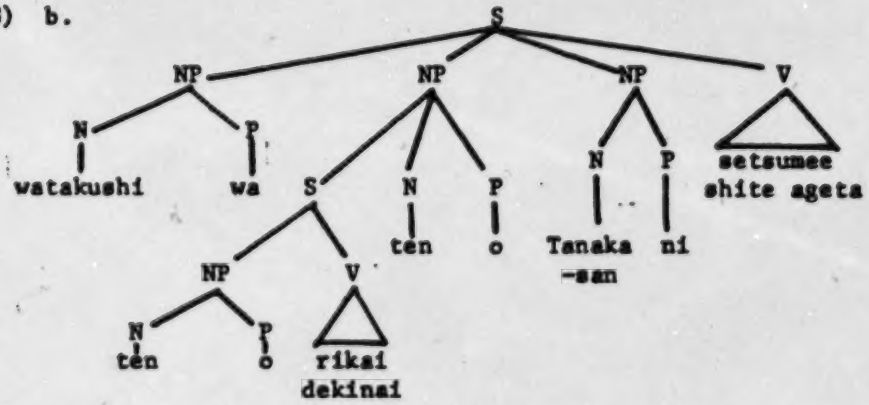
I had Mr. Tanaka explain the point which I could not understand.

In sentence (77a), the object of the subordinate verb rikai dekiru 'understand' is ten 'the point' and also the object of the matrix verb setsumee suru 'to explain'. In sentence (178a), the object of both the subordinate verb and the matrix verb is ten 'the point'. Therefore, the abstract structures for the above sentences are:

(177) b.



(178) b.



The above structures are obviously relative clause sentences, containing a noun in the embedded sentence identical to the head noun ten 'the point'. The fact that these sentences are relative clause sentences is further substantiated by the fact that they conform to the rules which work on relative clause sentences. For example, in sentence (177a), as in the other relative clause sentences, the subjective particle ga is changed into no when the Ga-weakening rule is applied:

(177) c. Watakushi wa kare no rikai dekinai ten o setsumee shite ageta.

In sentence (178a), the NP of the embedded S, which is [+human], and identical to the NP which is in a command relationship with it, may be reflexivized.

(178) c. Watakushi wa jibun ga rikai dekinai ten o Tanaka-san ni setsumee shite moratta.

Thus, both the fact that sentences contain a noun in the subordinate clause identical to the head noun, and the fact that they conform to the rules which are applied to relative clause sentences, suggest that these sentences are relative clause sentences.

Now, compare sentences (179) and (180) with sentences (177) and (178).

(179) a. Watakushi wa sono riyuu ga wakaranai to iu ten o kyoochoo shita.

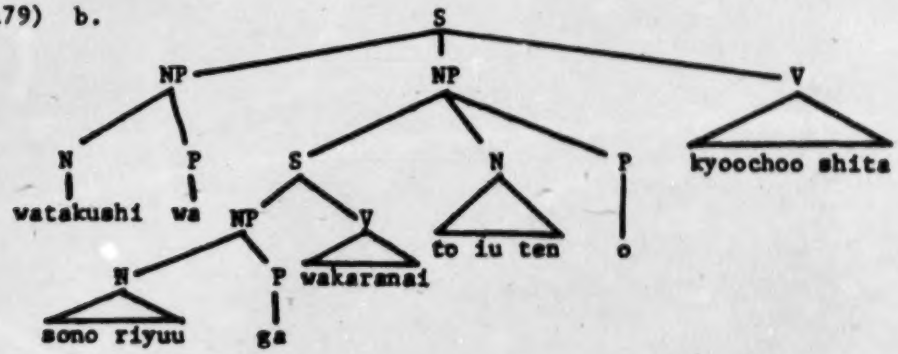
I stressed the point that I did not understand the reason.

(180) a. Tanaka-san wa Sumisu-san ni watakushi ga sono koto ga yoku wakaranai to iu ten o setsumee shite ageta.

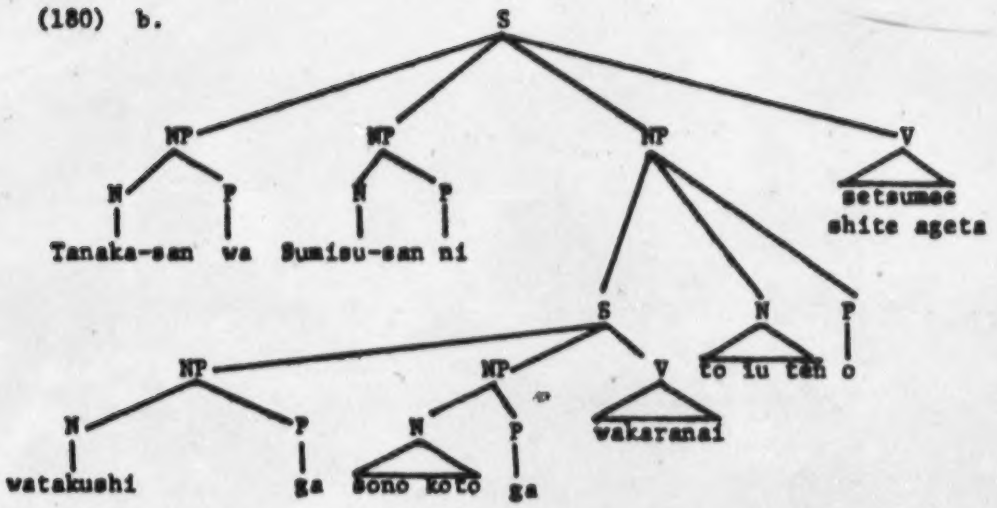
Mr. Tanaka explained to Mr. Smith the point that I did not understand the matter.

In sentence (179a), the object of the subordinate verb is sono riyuu 'the reason' and that of the matrix verb is to iu ten 'the point that'; in sentence (180a), also, the object of the subordinate verb is sono koto 'the matter', and that of the matrix verb is to iu ten 'the point that'. There is no possibility that ten could be the object of the subordinate verb in sentence (179a) or (180a). Consequently, the abstract structures for these sentences are:

(179) b.



(180) b.



Thus, there is no identity of a noun in the embedded sentence to the head noun, which must differentiate these sentences from relative clause sentences such as sentence (177a) and (178a). The abstract structures above are of nominal clauses, having to iu ten as complementizer. Thus, the formal noun ten can either be the head noun of relative clause sentences or of nominal clause sentences.

Sentences containing the formal noun tokoro provide further examples that a formal noun may perform more than a single syntactic function. Observe the following:

(181) a. Koko ga watakushi ga kuru tokoro desu.
This is the place to which I come.

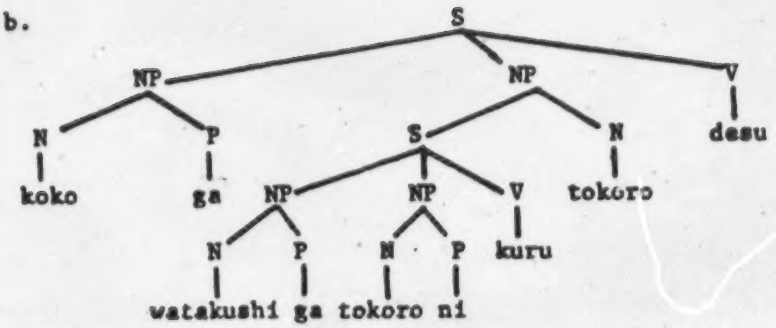
(182) a. Ano heya ga ima Tanaka-san ga nete iru tokoro desu.
This room is where Mr. Tanaka now is sleeping.

(183) a. Watakushi wa kiree na tokoro o mitsukemashita.
I found a nice place.

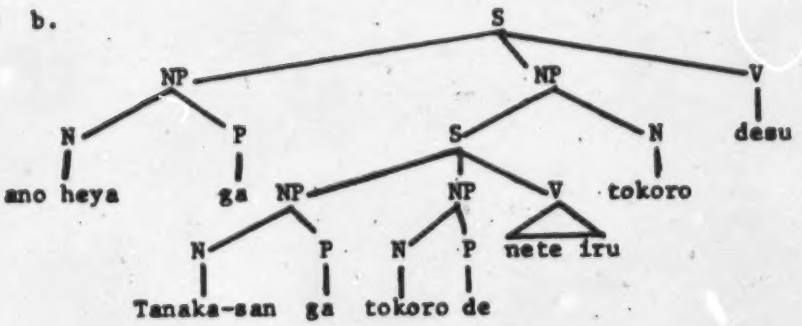
(184) a. Yakamashii tokoro ga kirai desu.
I don't like noisy places.

It is clear that the above sentences are relative clause sentences which have the following structure.

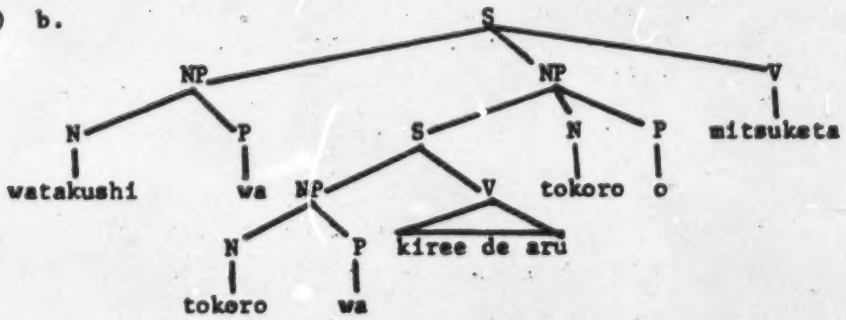
(181) b.



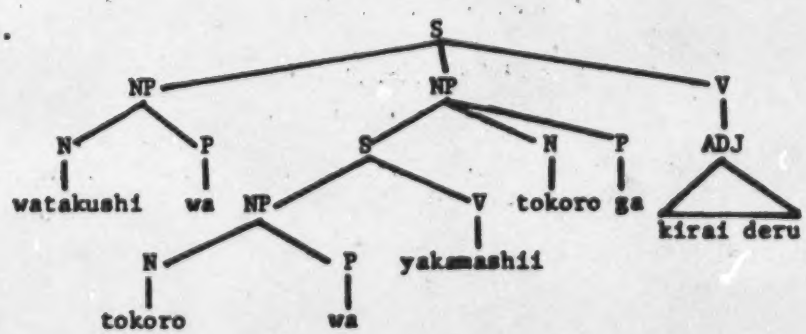
(182) b.



(183) b.



(184) b.



The underlying structures of these sentences satisfy the sentence structure of the NP deletion rule, so the NP of the constituent S, which is identical with the head noun, is deleted and the surface structure S is derived. Thus in the above sentences, tokoro functions as the head noun of the relative clause sentences meaning 'place'.

Now observe that the following sentences are ambiguous.

(185) Watakushi wa Tanaka-san ga jidoosha ni noru tokoro o mimashita.

a. I saw Mr. Tanaka getting into the car.

b. I saw the place where Mr. Tanaka gets into the car.

(186) Akachan ga nete iru tokoro ga miemasu.

a. I can see the baby while it is sleeping.

b. I can see the place where the baby is sleeping.

(187) Kanojo wa kare ga sukii o shite iru tokoro o shashin ni totta.

a. She took a picture of him skiing.

b. She took a picture of the place where he was skiing.

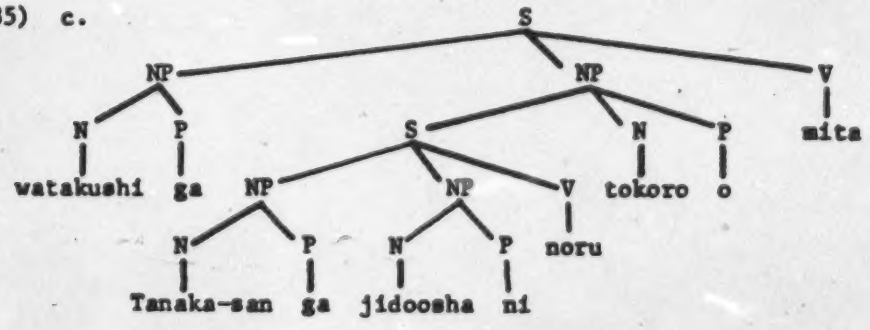
(188) Kare wa jibun ga ugoite iru tokoro o kagami de nita.

a. He saw himself moving in the mirror.

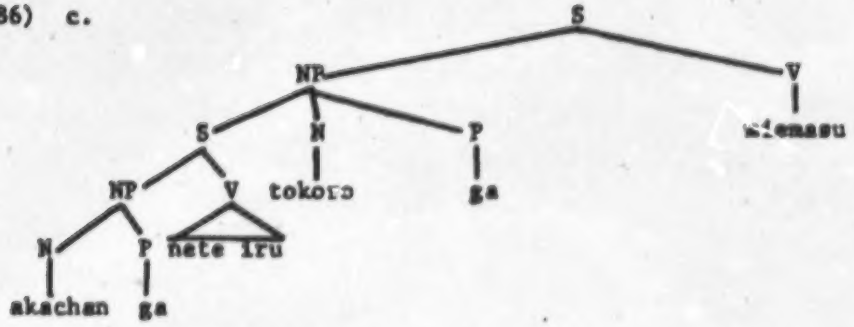
b. He saw the place where he is moving in the mirror.

The existence of two different interpretations is good evidence that these sentences are derived from two different underlying structures. Since the (b) interpretations are derived from underlying relative clause structures, apparently the (a) interpretations are derived from nominal clause structures.

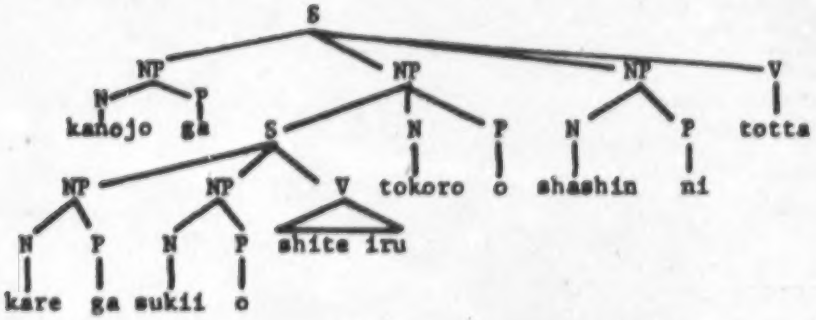
(185) c.



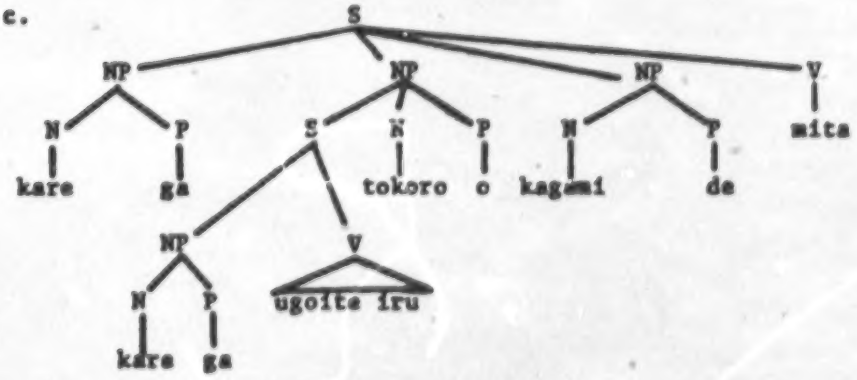
(186) c.



(187) c.



(188) c.



The intuitive grammatical relations in the (b) interpretations bear out these structures. They can be further substantiated by the following facts. Like other nominal clause sentences, tokoro may be deleted after a tensed verb and automatically replaced by no (cf. section 6).

(185) d. Watakushi wa Tanaka-san ga jidoosha ni noru $\left\{\begin{matrix}\text{tokoro}\\ \text{no}\end{matrix}\right\}$ o mita.

(186) d. Akachan ga nete iru $\left\{\begin{matrix}\text{tokoro}\\ \text{no}\end{matrix}\right\}$ ga miemasu.

(187) d. Kanojo wa kare ga sukii o shite iru {tokoro / no} shashin ni totta.

(188) d. Kare wa jibun ga ugoite iru {tokoro / no} o kagami de mita.

Thus the formal noun tokoro, like the formal noun ten, may be a head noun both of relative clause sentences and of nominal clause sentences. So, tokoro performs more than one syntactic function. Accordingly, there is no reason to assume that all formal nouns should be distinguished from the head noun of relative clauses or that all formal nouns perform a single function.[13]

11. Another Type of keishiki meishi

Now, consider the following sentences containing such formal nouns as hazu, mono, wake, and tokoro.[14]

(189) a. Ano hito wa iku hazu desu.
He is supposed to go.

b. Ano hito wa iku hazu deshita.
He was supposed to go.

c. Ano hito wa itta hazu desu.
He ought to have gone.

(190) a. Ano hito wa ima iku tokoro desu.
He is about to go.

b. Ano hito wa ima iku tokoro deshita.
He was about to go.

c. Ano hito wa itta tokoro desu.
He has just left.

d. Ano hito wa itta tokoro deshita.
He had just left.

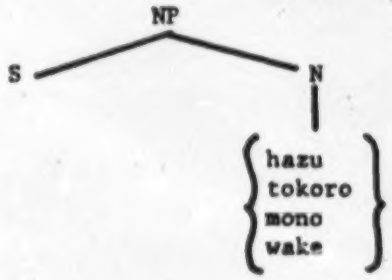
(191) Kodomo wa gakkoo ni iku mono desu.
A child should go to school.

(192) a. Ano hito wa ashita nihon ni iku wake desu.
In short, he is going to Japan tomorrow.

b. Ano hito wa nihon ni itta wake desu.
In short, he went to Japan.

c. Ano hito wa nihon ni iku wake deshita.
He was supposed to go to Japan.

The above sentences seem to have the same surface structure as nominal clause sentences.



However, as will be shown below, they have different syntactic characteristics from nominal clause sentences containing koto.

First of all, when the particle wa appears in nominal clause sentences as the subjective particle of the matrix S without being followed by a different subject of the embedded S, we can always reflexivize the NP deleted by NP deletion, as in the following.

(193) a. Ano hito wa iku koto o kiratte iru.

b. Ano hito wa jibun ga iku koto o kiratte iru.
He does not like to go.

However, although sentences containing formal nouns like hazu, mono, tokoro and wake also possess the subjective particle wa followed directly by the predicate, we cannot reflexivize the NP, which would be deleted.

(194) Ano hito wa { iku / *jibun ga iku } hazu des.
He is supposed to go.

(195) Ano hito wa { iku / *jibun ga iku } wake desu.
In short, he is going.

(196) Ano hito wa ima { iku / *jibun ga iku } tokoro desu.
He is about to go.

(197) Kodomo wa { gakkoo ni iku / *jibun ga gakko ni iku } mono desu.

A child should go to school.

Secondly, in no sentence containing any of the formal nouns in question can one of these formal nouns be a head noun of a nominal clause in any other position than complement of the copula. Observe in the following that nominal clause sentences containing koto may be followed directly by a verb or an adjective.

(198) a. Ano hito ga iku koto o shitte iru.

I know that he is going.

(199) a. Ano hito ga iku koto ga bareta.

It was revealed that he is going.

(200) a. Ano hito ga iku koto wa hontoo da.

It is true that he is going.

(201) a. Ano hito ga iku koto wa ii.

It is nice that he is going.

However, when sentences containing the formal nouns hazu, mono, wake and tokoro are followed directly by a verb or an adjective, ungrammatical sentences are generated as below.

(198) b. *Ano hito ga iku hazu o shitte iru.

I know that he is supposed to go.

(199) b. *Ano hito ga iku hazu ga bareta.

It was revealed that he is supposed to go.

(200) b. *Ano hito ga iku hazu wa hontoo da.

It is true that he is supposed to go.

(198) c. *Ano hito ga iku hazu wa ii.

It is nice that he is supposed to go.

(199) c. *Kodomo ga gakkoo ni iku mono ga bareta.

It was revealed that children should go to school.

(200) c. *Kodomo ga gakkoo ni iku mono wa hontoo da.

It is true that children should go to school.

(201) c. *Kodomo ga gakkoo ni iku mono wa ii.
It is nice that children should go to school.

(198) d. *Ano hito ga ashita iku wake o shitte iru.[15]
I know that, in short, he is going tomorrow.

(199) d. *Ano hito ga ashita iku wake ga bareta.[15]
It was revealed that, in short, he is going tomorrow.

(200) d. *Ano hito ga ashita iku wake wa hontoo da.
It is true that, in short, he is going tomorrow.

(201) d. *Ano hito ga ashita iku wake wa ii.
It is nice that, in short, he is going tomorrow.

(198) e. *Ano hito ga ima iku tokoro o shitte iru.[15]
I know that he is about to go now.

(199) e. *Ano hito ga ima iku tokoro ga bareta.[15]
It was revealed that he is about to go now.

(200) e. *Ano hito ga ima iku tokoro wa hontoo da.
It is true that he is about to go now.

(201) e. *Ano hito ga ima iku tokoro wa ii.[15]
It is nice that he is about to go now.

To convey the meanings listed above, a speaker must use the following expressions:

(198) f. Ano hito ga iku hazu da to iu koto o shitte iru.

(199) f. Ano hito ga iku hazu da to iu koto ga bareta.

(200) f. Ano hito ga iku hazu da to iu koto wa hontoo da.

(201) f. Ano hito ga iku hazu da to iu koto wa ii.

(198) g. Kodomo ga gakkoo ni iku mono da to iu koto o shitte iru.

(199) g. Kodomo ga gakkoo ni iku mono da to iu koto ga bareta.

(200) g. Kodomo ga gakkoo ni iku mono da to iu koto wa hontoo da.

(201) g. Kodomo ga gakkoo ni iku mono da to iu koto wa ii.

(198) h. Ano hito ga ashita iku wake da to iu koto o shitte iru.

(199) h. Ano hito ga ashita iku wake da to iu koto ga bareta.

(200) h. Ano hito ga ashita iku wake da to iu koto wa hontoo da.

(201) h. Ano hito ga ashita iku wake da to iu koto wa ii.

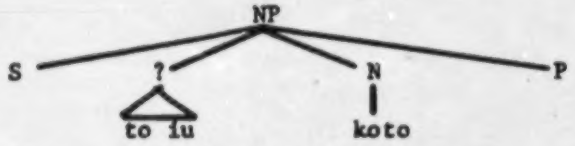
(198) i. Ano hito ga ima iku tokoro da to iu koto o shitte iru.

(199) i. Ano hito ga ima iku tokoro da to iu koto ga bareta.

(200) i. Ano hito ga ima iku tokoro da to iu koto wa hontoo da.

(201) i. Ano hito ga ima iku tokoro da to iu koto wa ii.

As shown above, sentences containing the formal nouns, hazu, mono, wake and tokoro need to iu koto to be grammatical when they are followed by a verb or an adjective. Since the nominal clause sentences like the above have the abstract structure



these formal nouns cannot belong to the complementizer, which is the sister of the embedded S. In other words, these formal nouns can never function as head nouns.

That sentences containing these formal nouns cannot include reflexivized NP's, and that they have to take to iu koto after these formal nouns in order to make sentences grammatical, suggests that they are not complementizers at all, but simply predicates which may take sentential NP adjuncts at some abstract level, but which never permit the appearance of any complementizer on the surface. We have in mind an abstract structure of the following sort.

If the derivation of the sentences in question involves the reduction of this complex structure to a surface simplex, then the appearance of

wa as subject postposition is not due to the fact that the underlying structure is a complex sentence, but to the fact that these sentences ends in da, just as sentences like ano hito wa kiree da (She is pretty) do. Consequently these formal nouns do not behave the same as the 'nominalizer' koto, and sentences containing these formal nouns are not the same kind of nominal clause sentences as those treated in this paper.

NOTES

[1]This paper is a revised version of my 1971 M.A. Thesis A Study of Nominal Clause Sentences in Japanese, in the Oriental Languages Department at UCLA. I would like to thank the members of my committee, Professors Robert Epp and Ensho Ashikaga of Oriental Languages and George Bedell of Linguistics, for their kind assistance in making it possible.

[2]There are many current romanizations for Japanese. Here I have followed that used in Niwa (1964).

[3]Some Japanese speakers feel that sentences like (10b) and (11b) sound unnatural, and much prefer the (a) versions. Whether this is really a question of grammaticality is rather difficult to determine. Here we assume that both versions are grammatical.

[4]We use the term "cleft" to refer to Japanese sentences of the sort illustrated, even though apparently similar English sentences are usually called "pseudo-cleft". These are the only type of cleft sentences which exist in Japanese.

[5]In Japanese, it seems that there is no sentence which contains to alone as complementizer but which is factive. This however does not lead to Kuno's conclusions that the usage of koto, to or to iu koto depend on the existence or non-existence of presuppositions on the part of the speaker. We cannot find factive examples with to because using to represents a quotation, and quotations are non-factive.

[6]We refer to the verbs of the main sentence: nageku 'regret' in (49) versus akiraka da 'be obvious' in (54), and so on. Whether there is or is not a semantic property behind this difference is unclear.

[7]The rules exclude deletion in cleft sentences by requiring the presence of a P. There are (later) rules which sometimes may delete a surface structure postposition. But in the clefted structure, the copula following the clefted NP is incompatible with any postposition. We have omitted the possible deletion of to iu in clefted sentences like (54) to (57).

[8]We would hope that the verbs relevant here are not merely an arbitrary list, as Ueda and Makino seem to imply, but a coherent class definable indepently on the basis of other (perhaps semantic) characteristics. However all that is now clear is that factivity is not the characteristic in question.

[9]The No-insertion was suggested by Professor Bedell in conjunction with koto deletion. See his paper in this volume for more details.

[10]Examples (84) to (91) are Makino's, 4-19b, 4-27a, 4-29, 4-32b, 4-32c, 4-37b, 4-35 and 4-29, respectively.

[11]Makino's 4-37a.

[12]The version with no is of course grammatical in a different meaning: John ordered someone to give your book to Bill.

[13]The syntactic characteristic most often given for keishiki meishi traditionally is of course that they must always occur with some modifier or other. That is, sentences like the following are extremely unnatural.

(a) ?Ten o setsumee shite ageta.

(b) ?Ten o rikai dekinai.

(c) ?Tokoro wa yakamashii.

(d) ?Tokoro ga miemasu.

But this fact, however it is to be treated, is independent of the point we are making.

[14]This tokoro is apparently distinct from the one(s) discussed in the foregoing section.

[15]These sentences have grammatical readings as relative clause structures, irrelevantly to our present argument.

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